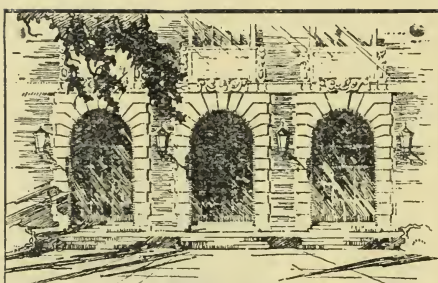


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Origin of the
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CONCEPT



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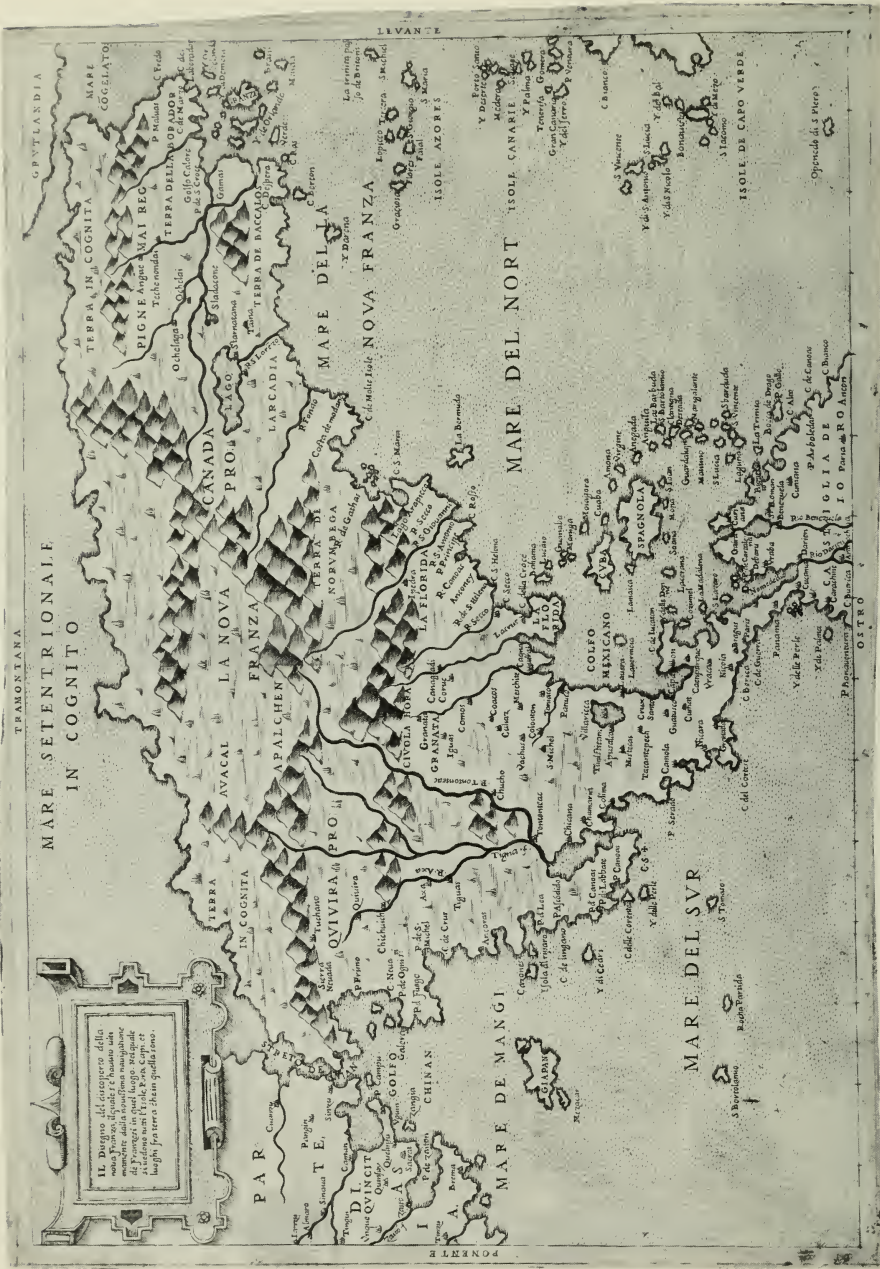
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THE EARLIEST KNOWN MAP SHOWING THE STRAIT OF ANIAN

Origin of the
STRAIT OF ANIAN
CONCEPT

By
GEORGE E. NUNN

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THE FRONTISPIECE

The map of North America by Bolognino Zaltieri is shown in the state prior to the signature which added two lines to the title as follows: *Venetijs aeneis formis Bolognini Zalterij* / *Anno. M. D. LXVI.*

The undated state bears every evidence of being a very early impression and, incidentally, has the same watermark as my copy of the first state of the large Bertelli World map entitled *VNIVERSALE DESCRITTIONE DI TVTTA LA TERRA CONOSCIUTA FIN QVI* and dated 1565.

G. H. B.

ORIGIN OF THE STRAIT OF ANIAN CONCEPT

THE origin of the supposed existence of the Strait of Anian is one of the great geographical problems of the sixteenth century. Many writers¹ have discussed the problem. Some have written almost wholly from the standpoint of American exploration. Others have written wholly with their eyes on Marco Polo and his Travels. Still others have written about the strait as a feature of Gastaldian cartography. Some of the accounts, as those of Bancroft and Kohl, are entirely superseded by the writings of Sophus Ruge and Christian Sandler. Since the strait belonged to that region where America and Asia faced each other it is as much a part of the geography of one as it is of the other. That means that the study of the Strait of Anian must not be confined to either the Spanish accounts of exploration of the Pacific and Western America, or to Marco Polo's account of his travels. Equal notice must be taken of American and Asiatic exploration because the investigation of the unknown portion of the world proceeded as well from Asia toward the East as from Europe toward the West. American geographical conceptions had their origin in the blending of accounts of Asiatic and American explorations. A more comprehensive outline of this blending may throw considerable light on the origin of the conception of the Strait of Anian.

¹ Justin Winsor: Discoveries of the Pacific Coast of North America. Vol. II Narr. and Crit. Hist. of Am. pp. 430-472. J. G. Kohl: Asia and America, Am. Antiq. Soc. 1911 reprint. H. H. Bancroft: Northwest Coast. Vol. I Ch. II pp. 32-69. Stefano Grande: Notizie sulla vita e sulle opere di Giacomo Gastaldi. Torino 1902. Godfrey Sikes: The Mythical Straits of Anian. Bul. Am. Geog. Soc. Vol. XLVII, 1915, pp. 161-172. Anonymus: The Strait of Anian, The Geog. Jour. Vol. XLV, 1915, pp. 540-541. Sophus Ruge: Fretum Anian, published first in Geschichte der Beringstrasse vor ihrer Entdeckung, 1873 and later, Abhandl. u. Vortr. z. Gesch. der Erdk. Dresden, 1888, pp. 53-70. Christian Sandler: Die Anian-Strasse und Marco Polo, Zeitschrift der Gesellschaft.

PRE-COLUMBIAN ASIATIC GEOGRAPHY

The present writer² has already pointed out how the two major sources of pre-Columbian Asiatic geographical conceptions were combined to form the ideas current in the time of Columbus. A resumé, necessary at this place for the sake of clearness and continuity, will suffice.

In the Renaissance, Western Europe, after a thousand years of darkness, had turned back with reverence to study anew the works of the Greeks and the Romans. In geography, this meant the works of Strabo, Pliny, and above all Ptolemy. Belief in Ptolemy and his scientifically drawn maps became so strong as practically to exclude all other geographical conceptions in regard to the 180 degrees he gave to the known world. The portulan charts are not an exception to this statement because they omitted all latitudes and longitudes and hence presented no geographical theories of their own.

The other major source of geographical information was Marco Polo.³ There were a number of other informants in regard to Eastern Asia but he was by far the most important. The great Eastern regions he wrote about were interpreted by geographers in the time of Columbus to be new regions lying beyond Ptolemy's farthest known east. The bases of this error lay in the facts; that Ptolemy had represented more land as lying beyond his extreme known east; that Marco Polo's regions bordered on an eastern ocean; that Marco Polo wrote an account of a four months journey westward from *Cambaluc* which termi-

für Erdkunde zu Berlin, Band XXIX, 1894, pp. 401-408. Olinto Marinelli: Lo stretto di Anian e Giacomo Gastaldi, *Revista Geografica Italiana*, Annata XXIV, 1917, pp. 39-49. Henry Wagner: Some Imaginary California Geography; *Am. Antiq. Soc.* April, 1926 reprint. Roberta Almagia: Intorno ad una Raccolta di Carte Cinquecentesche, *L'Universo* Anno VIII, 1927, pp. 265-293. G. Caraci: *Tabulae Geographicae*, Vol. II, Florence 1927. Henri Vignaud: Une Ancienne Carte Inconnue de l'Amerique, La premiere ou figure le future detroit de Behring, *Journal de la Société des Americanistes de Paris*, Nouvelle Série Tome XIII, 1921. Henry R. Wagner: Sir Francis Drake's Voyage Around the World, San Francisco, 1926, p. 4 and other references. Emerson D. Fite and Archibald Freeman: *A Book of Old Maps*, Cambridge, 1926 pp. 72-74. Mrs. Zelia Nuttall: *New Light on Drake*, Hak Soc., London, 1914, pp. 162, 251 and other references under Bacallaos.

² G. E. Nunn: *The Lost Globe* Gores of Johann Schöner, 1523-1524, *A Review*, *The Geog. Review*, Vol. XVII, 1927, pp. 476-480. G. E. Nunn: *World Map of Francesco Roselli*, Philadelphia, 1928.

³ Sir Henry Yule: *The Book of Ser Marco Polo*, 3rd edition, edited by Henri Cordier, 2 Vols. London, 1921. A comparative text edition has recently appeared in Italy. This should prove a most valuable contribution to the Marco Polo literature.

nated at a place called *Amien* and which Marco Polo said was very near to India; and finally because Marco Polo described the country far west of *Cambaluc* as a great silk country and the home of Prester John.

As a result of interpreting these data, Ptolemy's *Serica* was identified as the land of Prester John or *Tartaria*, and the *Sinarum Situs*, whence the Romans obtained silk, as the extreme western part of *Mangi*. Marco Polo's regions were cartographically represented as adding 60 degrees of mainland to Ptolemy's 180 degrees of the known world. The island kingdom of *Zipango* added 30 degrees more to the Far East making the total extent of the known world 270 degrees from the prime meridian through the Canary Islands.

This combination of Ptolemy and Marco Polo is best known through the Behaim globe⁴ of 1492 but its origin is probably not due to Behaim because the same combination is found on the Laon globe⁵ and the Henricus Martellus Germanus⁶ map, one of which at least is probably anterior to the Behaim globe.

⁴ E. G. Ravenstein: Martin Behaim His Life and His Globe, London, 1908.

⁵ M. D'Avezac: Sur un Globe Terrestre Trouvé a Laon, Bul. de la Soc. de Geographie de Paris, Nov., Dec., 1860.

⁶ A. E. Nordenskiöld: Periplus, p. 123.

COLUMBIAN CONCEPTS OF ASIATIC GEOGRAPHY

Columbus was the producer of the next confusion in the geographical concepts of the Far East. As a result of his voyages on the coast of Africa he claimed that he had verified Alfraganus' length of a terrestrial degree and found it equal to $56 \frac{2}{3}$ Italian nautical miles. This value Columbus applied to the circumference of the earth and to the longitudes of the Far East. As a result he believed that *Cattigara*—on Ptolemy's 180th meridian—really lay on the 225th meridian, the extreme east of Asia about 1100 leagues west of the Canaries, and *Zipango* about 700 leagues west thereof. This placed *Zipango* nearly 45 degrees closer to Europe than it was placed by Behaim.⁷

When Columbus failed to find *Zipango* at the estimated distance on his first voyage he faced near mutiny among his crews. However, when he found Cuba some 1100 leagues from the Canaries, he tentatively accepted it as the mainland of Asia and sought *Zipango* to the East. In this way he identified *Española* as *Zipango* but found its main axis extending east and west instead of north and south.⁸

The later voyages of Columbus developed the American coast line of North and South America as part of the Asian World. At first South America was regarded as *El Nuevo Mundo* and identical with Marco Polo's greatest island of the world lying southeast of *Mangi* and *Ciamba*, Cuba was *Mangi* and Central America was *Ciamba*. The Pacific Ocean, of which he heard on his fourth voyage, was considered the *Sinus Magnus*. This theory required a passage-way between North and South America in the region of Panama. When the fourth voyage had failed to reveal such a passage-way, apparently the Columbus brothers⁹ modified their ideas and made

⁷ G. E. Nunn: The Geographical Conceptions of Columbus pp. 1-30.

⁸ Fernando Colombo: *Historie*, Venetia MDCLXXVIII, Cap. XX, pp. 95-96.

⁹ Fr. R. von Wieser: *Die Karte des Bartolomeo Colombo*, etc., Mitt. des Inst. für Österreichische Geschichtsforschung, Innsbrück, 1893, 3 maplets.

South America itself the great peninsula of Asia represented by Behaim as lying east of the *Sinus Magnus*. The explorations of succeeding Spanish navigators apparently confirmed this theory.

Acceptance of the Columbus claims to have reached Eastern Asia involved a rejection of Ptolemy's degree value and longitudes, a thing many people were not prepared to do. As a result there was a conflict between the Columbian and the Ptolemaic schools of geography. It was impossible satisfactorily to indicate that Columbus had reached Eastern Asia if the cartographer retained the Ptolemy longitudes and attempted to represent the entire 360 degrees of the earth's circumference. As a result there were developed at least eight types of maps in the early sixteenth century. The present writer¹⁰ has classified them as: I, The La Cosa map; II, Canerio-Cantino; III, Hamy-King; IV, Lenox globe; V, Waldseemüller 1507; VI, Ruysch 1508; VII, Bartholomew Columbus 1503; and VIII, Contarini-Roselli 1506. Each of these maps in its own way indicates the Columbus discoveries as some part of Eastern Asia, and varying in its method from the La Cosa map employing the Columbus degree value of 56 2/3 Italian nautical miles, to the Lenox globe drawn with Ptolemaic longitudes and which represents the Columbus discoveries as a group of islands belonging to Eastern Asia and lying about 60 degrees from its mainland.

It was the Waldseemüller¹¹ map of 1507 that caused the great confusion about Trans-Atlantic discoveries. In the absence of any method of certainly determining the longitudes of Eastern Asia and America, Waldseemüller devised a scheme of representing the known world so that both the Ptolemaic and the Columbian ideas could be represented. From the meridian of the Canary Islands to the east Waldseemüller represented within 270 degrees of longitude the Ptolemy-Marco Polo-Behaim

¹⁰ G. E. Nunn: World Map of Francesco Roselli, pp. 23-30.

¹¹ Joseph Fischer and F. R. von Wieser: The Oldest Map with the Name America.

world including the island of *Zipango*. This was the right hand side of the Waldseemüller map. On the left hand side in the remaining 90 degrees he represented the Columbian concept. Both the right and the left hand side of his map represented Eastern Asia. Take your choice of the two conceptions—a very plausible presentation of a problem insoluble at that time. A different, and in many respects a better, because a less confusing, device was that used by Bartholomew Columbus¹² on his three maplets of 1503. He represented Africa and Asia eastward from the first meridian according to the Ptolemy longitudes up to the 180th meridian. The rest of the circumference of the world from the Canaries westward he marked off into thirteen spaces but did not number the longitudes. Then he placed a legend off the coast of Guinea to the effect that Ptolemy counted 180 degrees or 12 hours to *Cattigara*, while Columbus and Marinus of Tyre counted 225 degrees or 15 hours.

Until after Magellan's voyage most of the map makers seemed to prefer the Waldseemüller type of map. Today many writers seeing an ocean represented by Waldseemüller west of the Spanish discoveries, and Asia represented with a complete coast have concluded that here is the evidence that it was early known that a new continent lay between Europe and Asia. This opinion however must be labeled with a question mark when it is pointed out that only the Waldseemüller type of map placed this sea between America and Asia, and that even this type granted that America was a part of Asia. The matter really in question was the length of a degree and the size of the earth. America was somehow a part of Asia.

After the Columbus fourth voyage, search continued about 20 years for a strait which Columbus had expected to find between *El Nuevo Mundo* and the mainland of Asia. It was sought both east and north of Panama, particularly in the region of Yucatan. Failure to find it anywhere

¹² See note 9.

south of Mexico led to search for it farther north. Cortés¹³ even proposed to look as far north as *Bacalaos*. Gomes¹⁴ once was reported, but falsely, to have found such a strait. Some maps continued to indicate an hypothetical strait in various places, one¹⁵ showing a long narrow passage-way from *Bacalaos* into the *Mar del Sur* near the Spice Islands. However, before 1530, most people abandoned the idea of there being a strait leading into the South Sea until it was revived in another form after the middle of the century when search for the Northwest Passage began.

The Waldseemüller map type showing a long narrow and apparently separate continent continued to figure in the cartographical record for many years. Schöner was one of the most prominent to use the Waldseemüller type in his globes. Of him we will speak in connection with the Magellan voyage. Mercator used the same type in his 1538 map and after him, Descellier¹⁶ and Des Liens employed it for the New World portion of their maps. These last seem to have derived the eastern Asiatic coast either from the mediaeval maps with their circumambient ocean or perhaps from Abulféda¹⁷. The latter said of the *Mer Environnante*—"Là, elle prend une direction nord-est et s'étend jusqu'à la mer de la Chine et de l'Inde. Ensuite elle se dirige à l'est jusqu'aux extrémités orientales de la terre, là où se trouve la Chine. Après cela, elle passe à l'est de la Chine, en se dirigeant vers le nord. Elle se prolonge dans cette direction jusqu'au delà de la Chine, à la hauteur du rempart de Gog et Magog. Elle se détourne ensuite, et baigne des régions inconnues, dans la direction de l'occident. En cet endroit elle borne le monde du côté du nord, et elle fait face au pays des Russes." Another variant was the Tramezini map 1554, similar in many respects to the Mercator 1538 map.

¹³ Letters of Cortes: Edited by F. A. MacNutt. 2 Vols, Vol. II, p. 207.

¹⁴ Peter Martyr: *De Orbe Novo*. MacNutt edition, 2 Vols., Vol. II, pp. 418-420.

¹⁵ A. E. Nordenskiöld: *Facsimile Atlas*. Plates XL and XLIV.

¹⁶ A. E. Nordenskiöld: *Periplus*. Plate LI-LIV. Descellier in spite of his separation of Asia and America located *Compestra Bergi* and *Desert de Lop* in America.

¹⁷ *Géographie D'Aboulféda*: Traduction Française par M. Reinaud, Tome II, p. 24.

A curious variation of the Waldseemüller "North America" is found in the Verrazzano¹⁸ map with the second isthmus in the region of the present State of Virginia. This concept reappeared much later in the Michael Lok¹⁹ map.

When Balboa made his discovery in 1513 he merely confirmed the Columbus concept as shown on the Bartholomew Columbus map. He regarded the Pacific as the *Sinus Magnus*, and expected to find the Spice Islands not far from the coast of Panama, and the *Aurea Chersonesus* just beyond the Spice Islands. The *Aurea Chersonesus* was the Malay Peninsula with Malacca as its great trading emporium. The Portuguese had already reached Malacca in 1509, the Moluccas in 1511, and China shortly thereafter. Their voyages to China however did not destroy the belief in the truth of the Marco Polo-Behaim geography. China was regarded as identical with the *Sinarum Situs* of Ptolemy²⁰. *Mangi* and *Cathay* lay beyond to the north and east. South America now was generally considered a peninsula of Asia.

While Balboa and Albuquerque were engaged in the race to see who first could reach the Spice Islands there is evidence that each of the two believed in the near presence of the other. The Portuguese at Malacca believed in the close proximity of the Spanish at Panama. In the *Paesi Nouamente Retrouate*²¹ there is a passage as follows,—
"Et li marinari di la: cioe li Mori nauigano con la tramontana & cō certi quadranti de legno: & aman dritta quando trauersano el colfo disse loro pilotti che restauano. xi. M. isole: & chi ui se metesse: si perderebbe: per che le sonno molte basse: debbeno esser quelle: che ha comenzato adiscoprire el re di Castiglia."

This quotation is in perfect accord with the three

¹⁸ H. C. Murphy: *The Voyage of Verrazzano*. p. 186.

¹⁹ Miller Christy: *The Silver Map of the World*, London 1900, Plate VII.

²⁰ M. F. de Navarrete: *Colección de los Viajes etc.* Tomo IV, p. 353, and elsewhere in Documents concerning the Congress of Badajoz.

²¹ *Paesi nouamente trouati & Novo Mondo da Alberico Vesputio Florentino intitulado* [1508] Reproduced in facsimile Princeton University Press, 1913, p. 73.

maps of the Moluccas drawn probably between 1516–1520 by the Reinels²² and also with the letter of Andrea Corsali²³ written VI di Gennaio MDXV. Andrea Corsali after describing the Moluccas said,—“& nauigando verso le parte d’Oriente, dicono esserni terra de Piccinnacoli, & è di molti openione che questa terra vada a tenere, & congiungersi per la banda di Leuante & mezzo giorno, con la costa del Bresil, ò verzino, perche per la grādezza di desta terra del verzino, nō si è per anchora da tutte le parti discoperta. Il qual verzino, per la parte di Ponente dicono cōgiungersi con l’isole dette le Antile del Re di Castiglia, et con la terra ferma del detto Re.”

²² Jean Denucé: *Les Origines de la Cartographie Portugaise et les Cartes des Reinels*. Map No. 5 in appendice.

²³ Gio. B. Ramusio: *Primo volume & Seconda editione delle navigationi et viaggi*, p. 198 verso.

MAGELLAN'S INFLUENCE ON THE COLUMBIAN CONCEPTS

When Magellan made his famous voyage he regarded South America as a part of Asia. Pigafetta²⁴ tells us that Magellan had seen a map of Behaim on which a passageway was indicated. Antonio Galvano²⁵ speaks of another map which showed the Strait as the Dragon's Tail. The Dragon's Tail was that portion of Behaim's eastern Asia extending between *Mangi* and India into the Southern Hemisphere and partially enclosing the Indian Ocean. The whole Dragon may be seen on the map of Henricus Martellus Germanus²⁶. Spain is the Dragon's head, France and Germany are the neck, Greenland and Arabia are the front legs, Asia is the body, *Mangi* and the *Aurea Chersonesus* are the hind legs, and this peninsula is the tail. Magellan found his passageway and then, proving that he regarded South America as the Dragon's Tail, he crossed the Pacific in search of the Moluccas by such a route that he must otherwise have encountered the eastern coast of the Behaim Peninsula according to the conception of the earlier Schöner globes. The Spice Islands were supposed to lie in the *Sinus Magnus* west of this Behaim Peninsula.

Magellan's voyage was held by Johann Schöner²⁷ to prove that South America was a peninsula from the mainland of Asia. His theories were set forth in the letter to Streytpergk and in his *Opusculum Geographicum*, as well as on his globes of 1523 and 1533. There had been represented according to the Waldseemüller manner of drawing maps two east coasts of Asia with two peninsulas besides Africa extending far into the southern hemisphere. South America, after the failure to find the Strait of Columbus, was considered one, and the other was represented on the Behaim Asia. Magellan's voyage around

²⁴ Antonio Pigafetta: *Magellan's Voyage Around the World*. J. A. Robertson edition, 3 Vols., Cleveland, 1906. Vol. I, p. 65.

²⁵ Antonio Galvano: *The Discoveries of the World*. Hak. Soc. London, 1862, p. 67.

²⁶ A. E. Nordenskiöld: *Periplus*, p. 123.

²⁷ Henry Stevens of Vermont: *Johann Schöner*, edited by C. H. Coote, London, 1888, pp. 95-99.

South America and across the Pacific to the Spice Islands had definitely proved that only one of these two existed. Therefore the conclusion—South America was proved to be a peninsula of Asia and the *Mar del Sur* was the *Sinus Magnus*.

The Schöner²⁸ maps almost displaced all other conceptions of world geography for the period 1523–1560. The great distance Magellan had revealed as separating Panama from the Spice Islands eliminated the degree value and the small circumference of the earth in which Columbus had believed. The Spanish members of the Congress of Badajoz, in yielding this concept and the claims based thereon fell back on the degree values and longitudes of Ptolemy which they considered proved correct by Magellan's voyage. They laid claim to the Moluccas, Malacca, and India to a point about 100 miles west of the mouth of the Ganges. The Portuguese²⁹ were accused of fraud in shortening the degree distance between the Cape Verde Islands and the Moluccas with the object of obtaining control of more than their rightful share of the East. Instead of the Portuguese being guilty of fraud, they were in turn rejecting the degree values and longitudes of Ptolemy for a set of new values based on a degree of about 70 miles, each mile somewhat longer than the Italian nautical mile. This shift of standards—the Spaniards from the Columbian to the Ptolemaic, and the Portuguese from the Ptolemaic to the new Portuguese,—continued to leave nearly 50 degrees difference between the two nations as regards the longitudes of the Far East.

Cortés' conquest of Mexico contributed its share to fix the Schöner concept which, except for longitudes, had

²⁸ This statement is not in conflict with the fact that the official Spanish government maps, such as the Ribero, do not show the connection of the coast lines of America and Asia. These maps omit all unexplored coasts. That they were not in conflict with the Schöner concept is proved by the Sebastian Cabot map of 1544. Cabot was Pilot Major of Spain and as such had charge of the making of the official government map. His map in common with the government maps omits the unexplored coasts but shows its acceptance of the Schöner theory by seating the Grand Khan in what appears on the maps of Descellier as part of the Pacific Ocean and by the name Terra Incognita written between the named portion of Asia and the mouth of the St. Lawrence River in America.

²⁹ M. F. de Navarrete: Coleccion etc. Tomo IV, pp. 347-348 and 354.

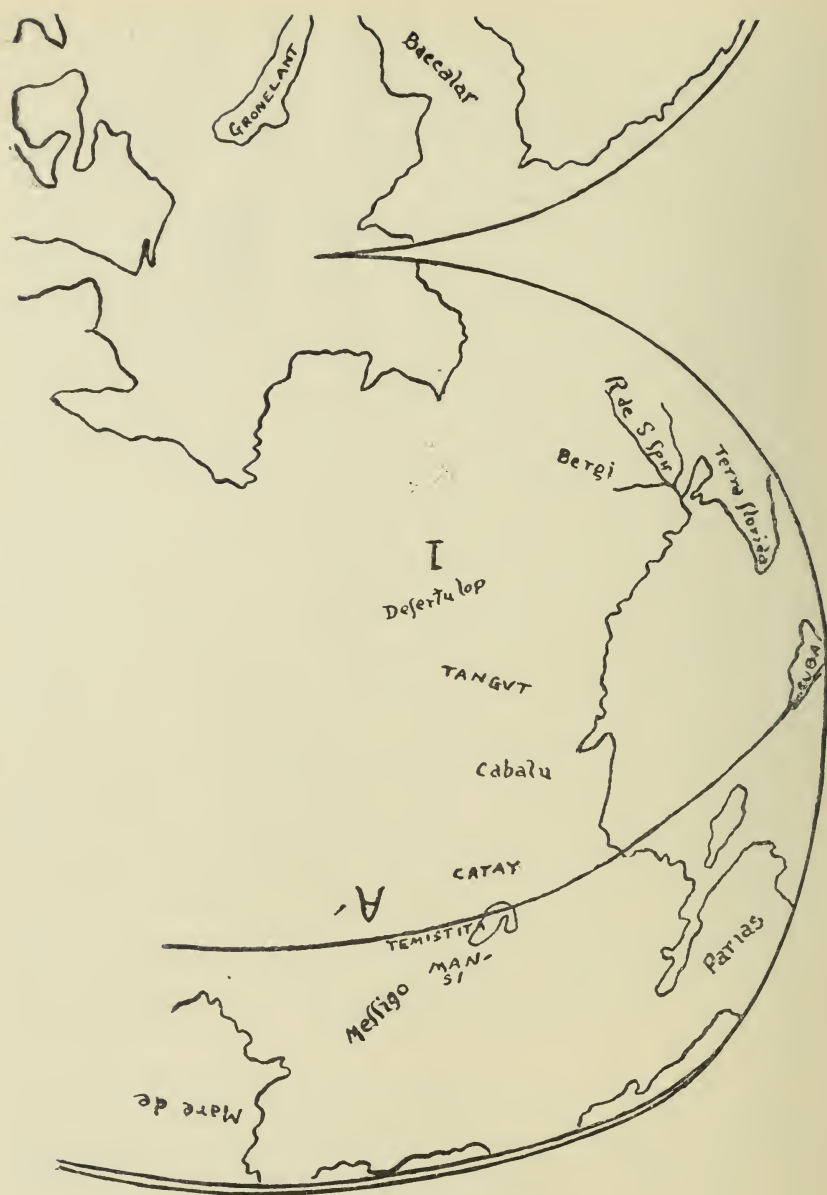


FIG. 1. ORONTIUS FINAEUS 1531.

been that of the Columbus brothers after the fourth voyage. The wealthy city of *Temistitlan*³⁰ in the lake was represented on many a map as the city of *Quinsay* of Marco Polo's east. Behaim had placed *Quinsay* and *Zaiton* about 240 degrees east of the Canary Islands. Oviedo³¹ in his *Historia General y Natural de las Indias* tells us that in 1541 he received a letter from Don Antonio de Mendoza, Viceroy of New Spain, in which it is stated that the longitude of Mexico City had been determined by an eclipse of the moon. It was found to be 8 hours 2 minutes and 32 seconds west of Toledo. This would make almost 121 degrees, fixing the longitude of Mexico as nearly the same as the Behaim longitude of *Quinsay*, the difference being that between the Canary meridian and that of Toledo then figured at about 10 degrees on the Diego Ribero³² chart of 1529.

We know that Las Casas considered America to be a part of Asia. He repeatedly said so. Las Casas³³ comments on one of Columbus' letters to the Catholic sovereigns as follows,—“que aquestas tierras son parte de la India, y lo último della, de que á mi duda ninguna queda.” There follows five reasons why Las Casas believes the Indies to be part of Asia. In another place Las Casas quotes a letter³⁴ from Portuguese missionaries in Brazil to the effect that Sancto Tomas (one of the twelve apostles) had been in that country and that his footprints were still visible there on a river bank. Oviedo³⁵ also says that he has no doubt that one or more of the apostles had been in the Spanish Indies.

³⁰ Dr. F. Wieder: *Monumenta Cartographica*, Vol. I, Plates 1-3.

³¹ G. F. de Oviedo y Valdes: *Historia General y Natural de las Indias*, Tomo III, p. 540. Apparently Oviedo did not accept this longitude. Tomo III, p. 543.

³² A. E. Nordenskiöld: *Periplus*. Plate XLIX.

³³ B. de Las Casas: *Historia de las Indias*, Tomo II, p. 204-205, also Tomo I, p. 315 and Tomo V, pp. 371-374.

³⁴ B. de Las Casas: *Historia etc.*, Tomo II, p. 465.

³⁵ G. F. de Oviedo: *Historia General, etc.*, Tomo I, p. 387.

MODIFICATION OF THE MAP DUE TO THE EXPLORATIONS OF CORONADO AND DE SOTO

After the Spanish conquest of Mexico other adventurers sought wealth in the country north of Mexico. If *Temistitlan* was *Quinsay*, then somewhere in the North was *Cathay*. Panfilo de Narraez, after his unfortunate attempt to arrest Cortes, obtained a cedula to explore and conquer the territory north of *Panuco*. He was carried off of his course by a storm and the gulf stream so that he landed within the present limits of Florida. After great hardships and failure to connect with his supplies he built boats and tried to reach *Panuco*. All but five of his men were lost. Four, including Alvar Nuñez Cabeça de Vaca, reached Mexico after several years of wandering. They told tales of vast herds of cows and rumors of great cities. Cabeça de Vaca went to Spain to obtain a grant from the king and support for an expedition to the southern part of the present United States. He³⁶ never told the public just what he expected to find but he gave out that there were wonderful things to be expected. In Spain he found that Hernando De Soto had forestalled him and already had the royal cedula to conquer Florida. Meanwhile Friar Marcos de Nizza had been sent north from Mexico to verify the wonderful tales of Cabeça de Vaca. As a result of his reports Coronado led an expedition from Mexico into the North to find the wealthy seven cities of *Cibola*, and the kingdom of *Quivira*. At the same time Alarcon sailed up the Gulf of California into the Colorado river and a little later Cabrillo explored along the west coast of Baja California and northwards to some point on the coast of Northern California³⁷. Nothing but hardships and long marches fell to the lot of either Coronado or De Soto. They as well as Alarcon and Cabrillo all failed to find the great wealth of *Cathay*.

³⁶ The Discovery and Conquest of Terra Florida edited by W. B. Rye. Hak. Soc. London, 1851, pp. 11-12.

³⁷ H. H. Bancroft: The Northwest Coast. Vol. I, p. 14 says probably to latitude 44° north.

There is no mention of *Cathay* in any of the accounts we have of the De Soto expedition, but Castañeda³⁸ the chronicler of the Coronado expedition, tells us that if Coronado had turned to the west instead of to the east he would have found *Cathay* because Peru, New Spain, China and Greater India are all part of one mainland.

The explorations of Coronado, De Soto, Alarcon and Cabrillo definitely proved that there were no rich kingdoms in any portion of North America south of the 40th parallel. Cartographers, as a result, were forced to revise their records. *Cathay* and the other Asiatic countries and cities parted company with Mexico and New Spain. In their place appeared the names of other places and legends³⁹ connected with the Coronado and Cabrillo expeditions such as *Civola*, *Cucho*, *Tigues*, *Axa*, *Cicuich*, *Quivira*, *Sierra Nevada*, *Mare del Cataio over China*, and *Fin que Scoperso francº Vasquez de Coronado*. It seems that Francisco Lopez de Gomara⁴⁰ was responsible for these names and their location. Coronado had gone to the northeast into what is now Kansas but *Quivira* was misplaced in the northwest near the Pacific Coast. The Turks' story of the great river and the big canoes was perverted into a legend on the Pacific Coast, "Ship of Catayo."

³⁸ G. P. Winship: The Coronado Expedition 1540-1542. Ann. Rept. Bur. of Am. Ethnology for 1892-93. Part I, Washington, 1896. pp. 512-513, 525-526 and 539.

³⁹ Konrad Kretschmer: Die Entdeckung Amerikas. Atlas. Plate XXV, map of Battista Agnese latter half of the 16th century.

⁴⁰ Henry R. Wagner: Some Imaginary California Geography. Reprint from Am. Antiq. Soc. April 1926, pp. 4-9.

ZIPANGO IN CARTOGRAPHICAL RECORDS

About the same time that the Spaniards had explored the southern part of the present United States with the results noted above, the Portuguese first visited Japan. It was not a formal expedition of discovery but, according to Antonio Galvano⁴¹, the chance visit of three sailors named Antonio de Mota, Francisco Zeimoto, and Antonio Pexoto. As a result of this visit maps soon showed an island of Japan or Iapan as it was then spelled. This was the Marco Polo island of *Zipango*. Since the time of Johann Ruysch's map of 1508 *Zipango* had been generally considered as identical with *Española*. Ruysch placed a legend on his map between the coast of Asia and *Mundus Novus* saying,—Dicit⁴² M. Paulus Q e Portu Zaiton ad orientem 1500 miliarib9 est insula magna valde dicta sipāgo cuius habitatores sūt idolatre habēt proprium regē nulli sūt tributarii hic maxīa copia est auri et oīuz gemmarum generum: at quia insule a nautis Hispanorx ivēte hūc locū occupant hanc insulā hic statuere nō audemus opinātes quā Hispani Spagnolā vocāt sipāgū eē qñqdem sigula que de sipāgo scribūtur in spagnola. īveniūtur preter idolatriam.” The importance of this legend and the fact that the island of *Zipango* disappeared from all maps except those of the Waldseemüller type can hardly be overemphasized. It is of extreme significance in understanding that America was generally accepted as a part of Asia.⁴³

Even before the discovery of the true Japan, as a result of the general rearrangement of American geography necessitated by the explorations of Coronado, De Soto, Alarcon and Cabrillo, *Zipango* reappeared among the

⁴¹ Antonio Galvano: The Discovery of the World. Hak. Soc., London, 1862, pp. 229-230.

⁴² A. E. Nordenskiöld: Facsimile Atlas. Plate XXXII.

⁴³ Paul Graf Teleki: Atlas Zur Geschichte der Kartographie der Japanischen Inseln. 1909. Graf Teleki was in error when he published a section of the Nicolas de Canerio map 1502 as one showing the island of Japan. This section of the Canerio map shows that portion of the world beyond Malacca. The Malay peninsula was considered identical with the Aurea Chersonesus. Beyond it to the east lay Ptolemy's Sinus Magnus. At the north end of the Sinus Magnus was the extreme western part of Cattaio identical with the Sinarum Situs of Ptolemy. Nobody then placed Zipango in the Sinus Magnus. It was in the Oceanus Orientalis 1500 miles east of Mangi.

Islario General maps of Alonso de Santa Cruz⁴⁴. Likewise Sebastian Cabot⁴⁵ placed it on his world map of 1544. When the news of the discovery of Japan reached Europe it seems that the identity of Japan with the old *Zipango* was soon realized because the maps after Cabot's contain the real Japan and not the old *Zipango*.

⁴⁴ Alonso de Santa Cruz: *Islario General* etc., Bol. de la Real Sociedad Geográfica. Tomo LX and LXI, 1918-1919. Tomo LXI, 1919, lamina 105.

⁴⁵ Konrad Kretschmer: *Die Entdeckung Amerikas*, Atlas, Tafel XVI.

GENESIS OF THE SEPARATION OF ASIA AND AMERICA

Cabot's map was hardly completed before new ideas were forcing their way to acceptance over the older ideas that America was joined to Asia. Gonzalo Fernandez de Oviedo⁴⁶ the historiographer of the Indies said, "Con mi poca experiencia ha muchos dias que yo he entendido muchos errores palpables destas cartas del Gaboto é dessotros cosmógraphos." In another place, speaking of the country north of New Spain where America might be joined to Asia Oviedo⁴⁷ says, "La qual como no está toda descubierta aun, no se sabe si es mar ni tierra en el fin, ó si está toda alli rodeada del mar Oçeano, lo qual yo mas creo; é mi opinion é de otros hasta agora mas sospecha me da que no es parte de Assia, ni se junta con la que Assia llamaron los antiguos cosmógraphos." Oviedo's latest expression of his ideas of the geography of the northwestern part of North America was written in 1546. His final belief was that the coast continued definitely to the north. In this Francisco Lopez de Gomara seems to agree with Oviedo. This belief differed with the contemporary opinion of Gastaldi whose maps of 1546⁴⁸ and 1562⁴⁹ showed the coast of North America joined to that of Asia about the 40th parallel of latitude.

One argument that would have been of the utmost importance Oviedo seems never to have formulated, namely, that if America was joined with Asia there should have been present in America somewhere some of the fauna of Asia. Oviedo's history was not only a chronicle of the conquest but it was also a Natural History of the Indies.⁵⁰ He devoted eleven books to the later subject and he knew that in no part of the Americas had there

⁴⁶ G. F. de Oviedo: *Historia General* etc. Tomo III, p. 544.

⁴⁷ *Ibid.*, Tomo I, p. 463 and Tomo III, p. 597. See also Francisco Lopez de Gomara: *La Historia General de las Indias*, Anvers MDLIII, c. X-XII and CCXIII-CCXIII.

⁴⁸ Remarkable maps of the XV, XVI and XVII Centuries. Part IV, Giacomo Gastaldi's *Universale*, Venice, 1546.

⁴⁹ A. E. Nordenskiöld: *Periplus* p. 165. Gastaldi, 1562.

⁵⁰ Gio. B. Ramusio: *Delle Navigationi et Viaggi*. Vol. III, edition 1565, pp. 45-224 included the first 20 books of Oviedo. These twenty included all of Oviedo's Natural History.

been found any horses, sheep, goats, cattle except buffalo, elephants, camels or dogs except a certain kind that did not bark.

Sir Humphrey Gilbert⁵¹ did notice this fact and included it in his discourse to prove a passage by the northwest to *Cathaia* and the East Indies. The paragraph in question reads, "4 Furthermore it is thought, that if by reason of mountains, or other craggy places, the people neither of Cataia or Tartarie could enter the country of America or they of America have entered Asia if it were so joynd: yet some one savage or wandering beast would in so many years have passed into it: but there hath not any time bene found any of the beasts proper to Cataia, or Tartarie etc in America; nor of those proper to America, in Tartarie, Cataia, etc or any part of Asia. Which thing proveth America, not only to be one Island, and in no part adjoining to Asia: But also that the people of those countreys have not had any traffique with each other."⁵²

While it is true that this discourse of Sir Humphrey Gilbert was written after the Strait of Anian appeared on the maps yet it is based on material that was gathered before that event and is probably not original with Gilbert but was doubtless a subject of consideration in all of the Spanish government councils in regard to each expedition into the unexplored portion of the American continents. It is known that the vast herds of "cows" reported by Cabeça de Vaca was an important incentive in the expeditions of De Soto and Coronado.

Gilbert reported one other item bearing on the supposed connection or separation of America and Asia. John Barros the Portuguese historian stated that "the Cosmographers⁵³ of China affirm that the sea coast trendeth from thence (China) northeast to 50 degrees of septrionale latitude, being the farthest part that way the

⁵¹ Sir Humphrey Gilbert: A Discourse of Discovery for a new passage to Cataia, was written about 1566 but not published until 1576. Justin Winsor: Narr. and Crit. Hist. Vol. III, pp. 35 and 201.

⁵² Richard Hakluyt: The Principal Navigations Voyages etc., Glasgow. James MacLehose and Sons edition, 12 Vols. MCMIII-MCMV, Vol. VII, p. 165-166.

⁵³ Ibid, Vol. VII, p. 170. See next reference No. 54.

Portugals had then knowledge of; and that the cosmographers knew no cause to the contrary, but that it might continue farther." The year of this statement of de Barros is not given.⁵⁴ The final element probably influencing the cartographer was the Sebastian Cabot attempt under the patronage of England to find the Northeast Passage around the north of Europe to China. This exploration was based necessarily on the belief in the separation of Asia and America. The theory of the existence of the Northeast Passage did not involve the existence of the Northwest Passage. It was another twenty years before search began for the Northwest Passage. The importance of the statements from Oviedo is based upon the fact that we know that Oviedo⁵⁵ was in correspondence with Ramusio. Also it is known that Ramusio, Fracastoro, and Gastaldi formed part of a little group⁵⁶ in Venice who were closely associated with each other, possessed of an intense interest in a common subject, and collectively were in correspondence with those of a similar interest in all parts of the world. Moreover from the Gastaldi School of Cartography, if not from Gastaldi himself, originates the first map known to us showing the Strait of Anian.

The accumulation of this material together with a further shift in geographical concepts from the Ptolemy-Marco Polo-Behaim school to the newer Portuguese school in regard to the size of the earth, the length of a terrestrial degree, and the correct longitudes of the east forced the abandonment of the Columbus-Schöner concept of the connection of Asia and America. So far as we know the first map that showed this separation by means of the Strait of Anian was that known as the Bolognino Zaltieri⁵⁷

⁵⁴ Giovanni Battista Ramusio: *Delle Navigazioni et Viaggi*. Primo volume & seconda edizione Venetia MDLIII, p. 433. Paul Graf Teleki: *Atlas zur Geschichte der Kartographie der Japanischen Inseln*. Plate III. Anonymous Portuguese Sea Chart about year 1553.

⁵⁵ G. F. de Oviedo: *Historia General etc.*, Tomo III, pp. 150 and 543.

⁵⁶ S. Grande: *Le relazione geografiche fra P. Bembo, G. Fracastoro, G. B. Ramusio e G. Gastaldi*, *Mem. della Soc. Geogr. Italiana*, XII, 1905, p. 134.

⁵⁷ The frontispiece to the present work represents this map before signature and date. The later and more familiar state is reproduced in Justin Winsor: *Narr. and Critical Hist.* Vol. II, p. 451.

of 1566. The antecedents of the idea of the separation of the two continents has been shown above. There remain the questions, what was the source of the concept of the Strait and Kingdom of Anian and who⁵⁸ was responsible for the concept?

⁵⁸ H. H. Bancroft: *The History of the Northwest Coast*, Vol. I, pp. 53-55.

GENESIS OF THE STRAIT OF ANIAN

Alexander von Humboldt⁵⁹ thought the name came from Anus Cortereal, one of the brothers engaged in discovery on the Newfoundland-Labrador coast in 1500-1502. Burney⁶⁰ suggested the name came from Marco Polo. Amoretti⁶¹ thought the name had a Chinese origin and the form *Streto de Anian* indicated a Venetian-Italian medium, possibly Marco Polo, for its transmission to Europe. But it remained for Dr. Sophus Ruge⁶² to point out the passage in Marco Polo from which the story of the Strait of Anian is apparently derived. The passage is omitted in most of the editions of Marco Polo. The latest edition of Sir Henry Yule's "The Book of Ser Marco Polo⁶³ etc.," omits the passage from the text but gives it in a note as a very manifest interpolation though possibly still an interpolation by the traveler's own hand. Ruge found the passage in A. Bürck's *Reisen des Marco Polo*, Leipzig 1845, 3 Buch, 5 Cap., S 514. The Ramusio text gives the passage and as this text is probably directly concerned with the cartographical labors of Gastaldi and Zaltieri it is given here⁶⁴ "Del Colfo detto Cheinan, & de suoi fiume Cap 5. Partendosi dal porto di Zaitum si nauiga per Ponente alquanto verso Garbin, mille & cinque cento miglia, passando un colfo nominato Cheinan, ilqual colfo dura di ^{longhezza} ^{lunghezza} per il spatio di ^{due} ^{duoi} mesi, nauigando uerso la parte di ^{Tramōtana} ^{Tramontana}, ilqual per tutto ^{cōfina} ^{confina} verso Scirocco cō la prouincia di ^{Māgi} ^{Mangi}, & dall' altra parte ^{cō} ^{cō} Ania & Toloman, & con molte altre provincie ^{cō} ^{cō} quelle di sopra

⁵⁹ Alexander de Humboldt: *Essai Politique sur le Royaume de la Nouvelle Espagne*, Paris 1811, 2 Vols. and Atlas, Vol. I, p. 330.

⁶⁰ James Burney: *History of Discovery in the South Seas*, Vol. I, p. 5.

⁶¹ Carlo Amoretti: *Viaggio del Mare Atlantico al Pacifico*, Milan, 1811. H. H. Bancroft: *History of the Northwest Coast*, Vol. I, pp. 56 and 94 quotes from the French ed. *Voy. Maldonado* pp. 26 and 36-39.

⁶² Dr. Sophus Ruge: *Fretum Anian*, pp. 53-70 in *Abhandl. u. Vort. z. Gesch. der Erdkunde Dresden 1888*. Published earlier in *Die Geschichte der Beringstrasse vor ihrer Entdeckung*, 1873.

⁶³ Sir Henry Yule: *The Book of Ser Marco Polo*, ed. by Henri Cordier, 3rd edition, 1921, Vol. II, p. 266.

⁶⁴ Chr. Sandler: *Die Anian-Strasse und Marco Polo*, in *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*. Band XXIX, 1894, p. 403. Gio. Battista Ramusio: *Secondo volume delle Navigazioni et Viaggi*, etc. { Venetia MDLXXXIII libro Terzo Cap. 5, p. 51. } In all variations the upper is the reading of the MDLXXXIII edition and the lower that of MDLIX. No comma appears after Garbin or mesi in MDLIX edition.

nominate. Per dentro ^a questo colfo vi sono Isole infinite, & quasi tutte sono bene habitate, & ^{in quelle si truoua} gran quantità d' oro di paiola, qual si raccoglie dell' acqua del Mare, doue sboccano i fiume, & anchora di rame, & d'altre cose, & fanno mercātie de qllo, che si ^{truoua in un'} troua in una Isola, & nō si ^{truoua} nell' altra. ^{et} & contrattano ^{ancora} cō ^{queli} di terra ferma, q che li ^{vendon'} vèdono oro, rame, & altre cose, & da loro ^{comprano} le cose, che sono loro necessarie. Nella maggior ^{cōprano} parte di dette Isole, ^{ui} nasce assai grano. Questo colfo è tanto grande, & tante ^{genti} ^{gēti} habitano in quello, che par quasi un' altro mōdo.

Today this passage is supposed to refer to the Gulf of Tong-King between Anam and the Island of Hainan. Pauthier reads for *Anin*, *Aniu* and regards it as identical with either Tungking or Anam. Yule considers *Anin* as a place in the extreme southwest of Yun-Nan and *Toloman* (or *Coloman*) as western Kwei-Chau. *Zaitun*, Yule would find in T'swan-Chau between Fuchow and Amoy⁶⁵. As the passage above states Marco Polo had mentioned *Ania* (*Anin*) and *Toloman* (*Coloman*) previously. When he had been sent by the Grand Khan on his westward journey he had visited *Amien* apparently as the terminus of his outward trip after passing through Thebet and then on his return he visited *Anin* and *Toloman*.⁶⁶ When in *Amien* he said that he was very near India.⁶⁷ How did it come that the Italian cartographer misplaced *Anin*, *Toloman* and the Gulf of *Cheinan* to the far north on the other side of *Mangi* and *Cathay*?

However the point is that a different construction was placed on this passage and *Anin-Toloman* and *Cheinan* were placed not west and south from *Zaiton* but east and north. As Sandler says Ruge offered no explanation or theory to account for the change. Sandler⁶⁸ offers an hypothesis that *Ania* and *Toloman* are not *Anin* and

⁶⁵ Sir Henry Yule: The Book of Ser Marco Polo, as cited. Vol. II, pp. 120, 129 and 237-242

⁶⁶ Sir Henry Yule: The Book of Ser Marco Polo, as cited, Vol. II, pp. 119-124.

⁶⁷ Ibid, Vol. II, pp. 107 and 115.

⁶⁸ Chr. Sandler: Die Anian Strasse und Marco Polo, as cited, p. 406.

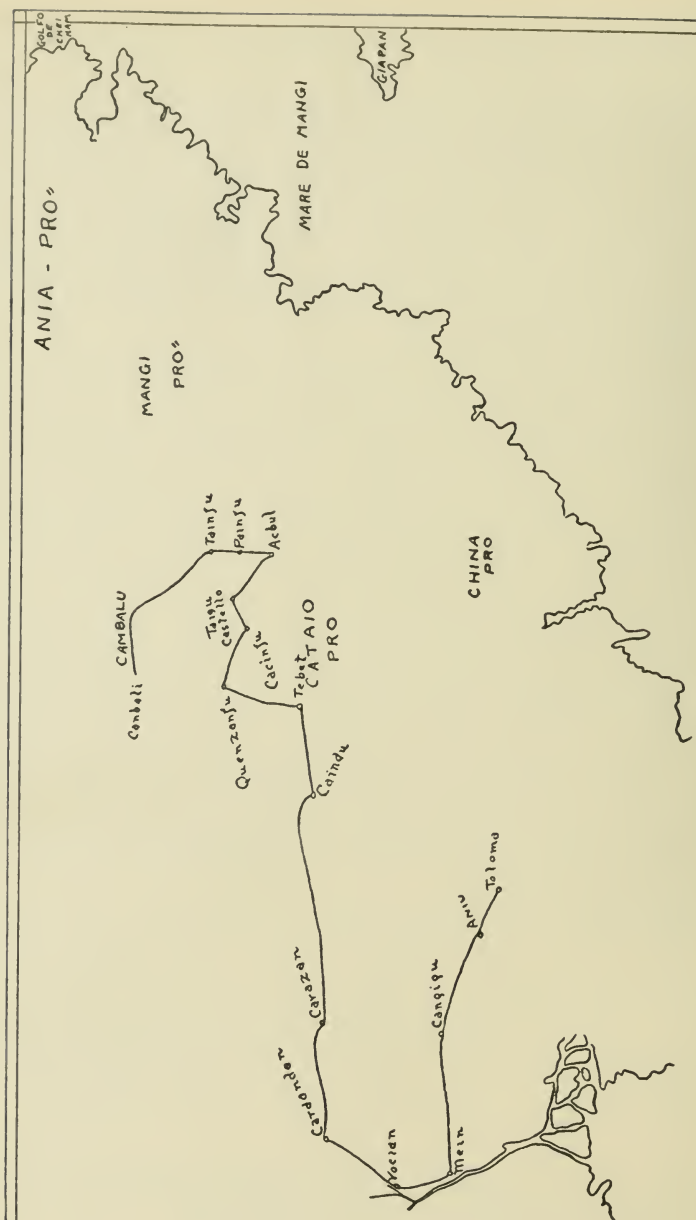


FIG. 2. MARCO POLO'S JOURNEY PLOTTED ON CASTALDI'S TERTIA PARS ASIAE 1561.

Coloman but that they represent other places and other people. In *Ania* he would find *Aino* or *Ainu*; and in *Toloman*, *Itelman* or *Iteljmen* in the Kamtschatka Peninsula. Finally in the last sentence stating that the gulf was so great and inhabited by so many people that it seemed a world in itself, Sandler sees an actual reference to America, a part of the New World.

That Giacomo Gastaldi understood *Anian* and *Toloman* to be separate regions from *Anin* and *Coloman* or *Toloman* mentioned on Marco Polo's journey to the west through Thibet appears certain because he placed *Anian* north of *Mangi* and *Cataio* on his map *Tertia Pars Asiae*⁶⁹ 1561, at the same time that he accounted for most of the cities and provinces mentioned by Marco Polo on that western journey. Plotting that journey on the Gastaldi map indicates a journey first southeast from *Canbali* through *Tainfu* and *Painfu* to *Acbul*, thence west through *Taigu Castello* and *Cacinfu* to *Quenzanfu*, south to *Tebet*, west to *Caindu*, *Carazan* and *Cardandan*, then south through *Vocian* to *Mein* on the Ganges River. On the return journey he went east through *Cangigu*, *Aniu* and *Toloma* or *Tholoman*.⁷⁰

Against Sandler's hypothesis is the fact that it requires an admission of the knowledge, either in Marco Polo's day or in Gastaldi's time, of unimportant peoples and regions far distant from the centers of knowledge and power both inconsistent with the passage in question and superior to what cartography and history indicate for another three hundred years after Gastaldi. This is such an important requirement that one must needs be slow in accepting Sandler's hypothesis. In the meantime the presence on the Behaim globe of the name *Tholoman* north of Cathai demands further investigation.

⁶⁹ A. E. Nordenskiöld: *Periplus*, Plate LVI.

⁷⁰ Gio. Battista Ramusio: *Secondo volume delle Navigazioni et Viaggi*, Venetia MDLXXXIII, fol. 32 and ff. especially folio 40.

INDEFINITE LOCATION OF COUNTRIES OF NORTHERN ASIA

If one turns back to review the cartography of America and Asia from the time of the Contarini-Roselli⁷¹ map of 1506 to the time of the appearance of the Strait of Anian, one will notice the very marked way in which the countries figuring in Mediaeval cartography moved eastward to figure in American geography. Contarini-Roselli moved the province of *Tangut Provincia Magna* so far east as to bring it within a short distance of Ireland. Johann Ruysch⁷² did the same thing in 1508, adding *Bergi*, *Desertū Lop*, and *Gog-Magog*, to the list of American countries.

The reason for this seems to lie in the division of Asia made by the ancient Greeks.⁷³ They had imagined a chain of mountains made up of the Taurus, Paropamisus, Emodus, and Imaus chains to extend from west to east the whole length of Asia. The land to the south was India and the territories of Alexander. North of these mountains were the lands of the various tribes of Scythians. Ptolemy continued this division although he varied the names of the mountain chains. He also divided Scythia itself into an eastern and a western part by a second chain of *Imaus Montes*. In the extreme east of India he placed the *Sinarum Situs* and north of the mountains the land of *Serica*. Throughout the middle ages both the Europeans and the Arabs had a much more imperfect knowledge of the regions north of the Himalayas than they had of the regions to the south. Some of the lands placed in the north were purely mythical such as the land of *Gog* and *Magog* and the land of the *Judei Clausi*.

The information which the mediaeval travelers, including Marco Polo, brought back from the east placed

⁷¹ A map of the world designed by Gio. Matteo Contarini and engraved by Fran. Roselli, 1506, London, 1924.

⁷² A. E. Nordenskiöld: Facsimile Atlas, Plate XXXII.

⁷³ E. H. Bunbury: A History of Ancient Geography, Vol. I, pp. 148 and 660. Vol. II, pp. 238, 490 and 578.

the countries of the present Chinese within the ken of Europeans but gave little more than a series of names to all of the present Siberia. There was little information whereby these north countries could be located relatively to the more famous countries and cities to the south. As a consequence the sixteenth century geographers scattered over the far north names derived from scriptures, from the Arabs, and from Marco Polo. Apparently the only guiding principle was to fill the whole area between Europe and the eastern ocean with names whose relative order in regard to each other was only roughly maintained. Thus Johann Ruysch filled his map of the north and made *Bergi extrema* and *Gog Magog* neighbors of *Gruenland* (Greenland) and *Terra Nova* (Newfoundland). When Johann Schöner made his map of 1523, combining as one the Behaim and Columbus geography which Waldseemüller had made separate, he moved *Mangi*, *Cathay* and *Zaiton* over into North America to be neighbors of Mexico.

After the explorations of De Soto and Coronado these last named places were restored to Asia but the more northerly regions which were not interrelated with the countries to the south were not so treated. This disturbed the relative positions of the countries in northeastern Asia in which they had been placed since the time of Johann Schöner's map of 1523.

Moreover the shift from Ptolemaic to Portuguese longitudes for eastern Asia brought *Cathay* and *Mangi* even further west than they had formerly been. Gastaldi made the extreme east of the *Mangi-Cathay* region* apparently 210 degrees (this is the longitude on the 1569 Gastaldi and the Zaltieri 1566 with reconstructed longitudes) instead of 230 degrees as it had been on the

* Olinto Marinelli is in error when he says that Gastaldi reduced the longitude of eastern Asia to 190 degrees on the map *Tertia Pars Asiae* 1561. These three maps are on the same elliptical projection as his maps of 1546 and 1562. This can easily be checked on the *Prima* and *Secunda Pars Asiae* by comparing the longitudes at the top and the bottom of the maps. There are no longitude figures at the top of the *Tertia Pars Asiae*. Olinto Marinelli as cited, p. 40. For *Tertia Pars Asiae*; A. E. Nordenskiöld: *Periplus*, Plate LVI.

Universale map of 1546 and 240 degrees as it had been on the Behaim globe of 1492. In fact, in order to find place for *Cathay*, Gastaldi had crowded it into *Tartaria* northwest of China instead of placing it far to the northeast as had been done since the Portuguese reached China in 1517. Some geographers were beginning to identify *Mangi* with China but in general they were considered separate regions. It was not until the overland journey from India through Turkestan and Mongolia, following the trail of Marco Polo, made by Benedict Goes in 1603-1607 that *Mangi*, *Cathay* and China were definitely determined to be one and the same. This eastward expansion of far northern Asia and the corresponding contraction westward of the non-interrelated regions of *Cathay* and *Mangi* resulted now in making neighbors of eastern *Cathay* and countries corresponding to central Siberia and what formerly had been extreme western *Cathay*. In this fact lies the explanation of the land of *Ania* being placed adjacent to the Pacific north of *Quinsay* on the *Tertia Pars Asiae* of Gastaldi.

CONFUSIONS DUE TO THE EARLIER GEOGRAPHERS

Another cause of the confusion over the location of *Toloman* and *Anin* lies in the fact that the earlier geographers like Behaim had followed literally Marco Polo's statement that he had traveled west from *Cambaluc* a good four months during the course of which he had

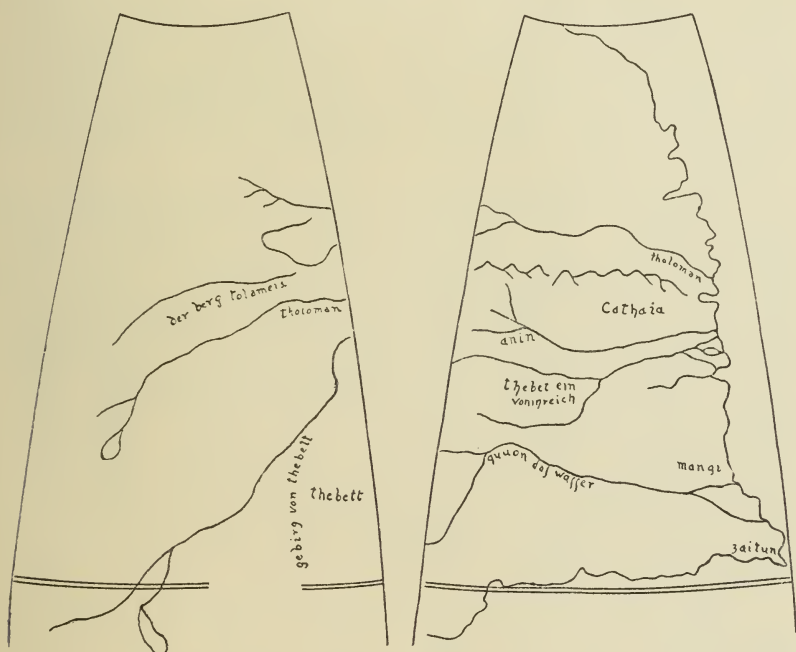


FIG. 3. BEHAIM GLOBE. Portion of gores J and K.
(Sketched from Ravenstein's facsimile.)

visited *Tebet*, *Caindu*, *Carajan* and *Mien*. Consequently the earlier geographers placed *Toloman* and *Anin* which Marco Polo visited on the return journey, likewise in the north. Then in the course of time the events mentioned above had compelled later geographers to shift the position of *Cathay* and *Mangi* and the other places described by

Marco Polo. In the case of Gastaldi, *Cathay* was placed southwest of *Mangi* instead of to the north thereof and the westward journey from *Cambaluc* was further twisted into a southwest one. Then by careless comparison with earlier maps a duplication was made of *Toloman* and *Anin* in particular. By a further confusion this northern *Toloman* and *Anin* or *Ania* were included in the north country outside of *Cathay* so that when *Mangi* and *Cathay* were assigned their new longitudes by Gastaldi on his *Tertia Pars Asiae* 1561, these countries of western *Cathay* found themselves respectively *Anin* (*Ania*) a neighbor to the north of *Mangi*, while other geographers moved *Toloman* (*Tolm*) over into America east of the Strait of Anian.

Behaim's geography of the westward journey of Marco Polo was rather confused. He duplicated⁷⁴ several of the places mentioned by Marco Polo. Thus on gore J he placed *der berg Tolomein* and *Tholoman*. On gore K near the coast he also located a *Tholoman*. Thus *Toloman* appears as a range of mountains, and also as an extensive country extending through about fifty degrees of longitude or as a great river—it is uncertain which Behaim intended. Behaim also located, *Thebet das gebirg*, *Thebet ein Konikreich*, *Thebet* (a city) and *gebirg von Thebet* besides other duplications. The *Tholomans* are all north or west of a range of mountains that bound *Cathay* on the north.

Anin presents another problem. Instead of several, there is only one *Anin*, that on gore K near a place called *Bengala Konikreich*. This name does not seem to reappear on any of the other Behaim type maps, as the Waldseemüller⁷⁵ 1507 for instance. It is probable that the name of the *Quian* river is the source of the corruption of the name *Anin*. Some map earlier than the Henricus Martellus Germanus map probably represented the

⁷⁴ E. G. Ravenstein: Martin Behaim, His Life and His Globe. Map in back pocket, sections 3 and 4.

⁷⁵ Joseph Fischer and F. R. von Wieser: The Oldest Map with the Name America. Plates 5 and 9.

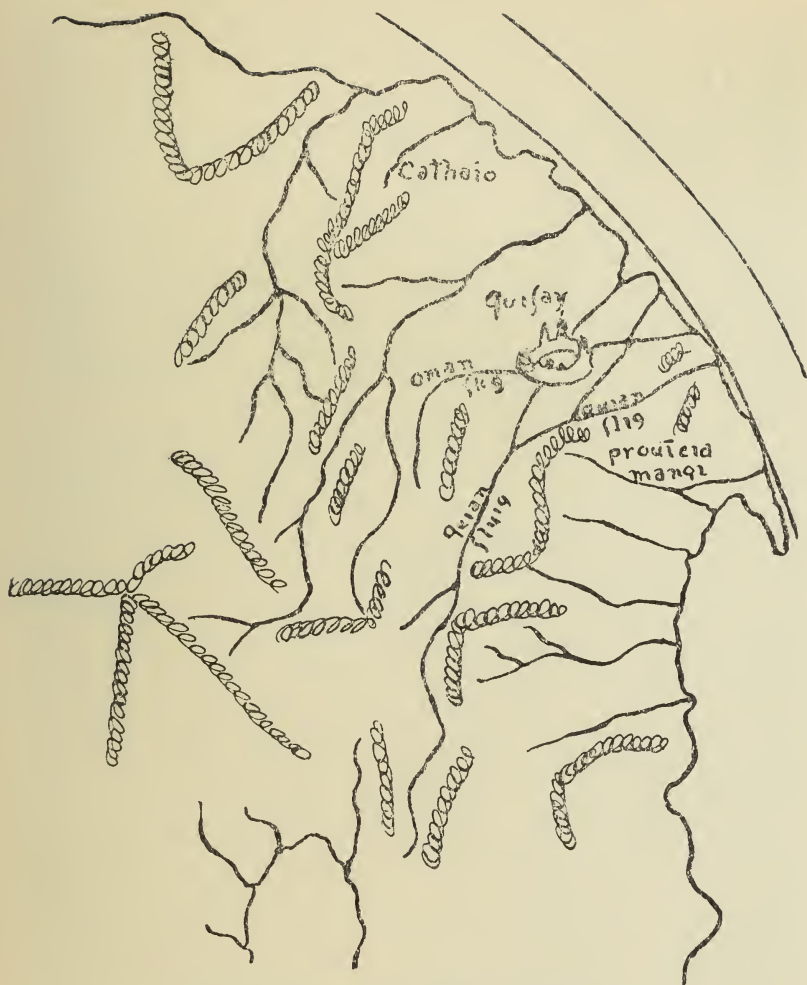


FIG. 4. HENRICUS MARTELLUS GERMANUS.
(Sketched from Nordenskiöld, *Periplus* p. 123.)

extensive *Quian* river system with the name appearing in three places at least. The Henricus Martellus Germanus map represents the river with the name *Quian* appearing twice, but a northern branch of the river has the name *Oman flug*. Waldseemüller in 1507 substitutes this last

name for the entire *Quian* river system and then duplicates the *Quian* river south of *Mangi Provincia*. The name *Oman flug* does not occur in the Yule Marco Polo. The Henricus Martellus Germanus map seems also to have been responsible for the first corruption of the name *Anian*⁷⁶. The name of the river *Quian*—the modern *Yang-Tze-Kiang*⁷⁷—is so written that the tail of the *Q* is lost, thus making possible the reading *Anian*. On both the Henricus Martellus Germanus map and the Gastaldi *Tertia Pars Asiae* 1561 this name occurs immediately north of the name *Provincia Mangi*. Thus it would appear that both *Oman*⁷⁸ and *Anian* are misreadings of *Quian* where the tail of the *Q* is lost.

The *Oman* river in turn was possibly confused with the *Onam* mountain range that appeared in the Behaim globe gore I. There the *Onam montes* correspond in longitude and other relations with the *Annibi montes* of Ptolemy.⁷⁹ This latter confusion appears the more probable when the Behaim globe gore I is compared with the Sebastian Cabot⁸⁰ map of 1544. There the *Annibi montes* become the *Anubii Mōtes* and appear near the extreme eastern portion of the Asia part of the map in the immediate region where Zaltieri placed the Strait of *Anian* separating Asia from America and also where Gastaldi placed his *Ania Pro* on his *Tertia Pars Asiae*.

By means of this multiple confusion, the duplication of *Anin* in the northwest and the southwest, the misreading of both *Oman* and *Anian* for *Quian* and their substitution in turn for *Anin*, the location of *Quian-Anian* with respect to *Provincia Mangi*, and the further confusion of *Oman flug* for *Onam Mōtes* or *Anubii Montes* in regard to its location with respect to *Tholoman* appears to lie the basis for the origin of the name and location of the *Ania provincia*.

⁷⁶ A. E. Nordenskiöld: *Periplus*, p. 123. This can not be stated positively true in the case of the original because the reproduction of this map is apparently not a photograph.

⁷⁷ Sir Henry Yule: *The Book of Ser Marco Polo*, as cited. Vol. II, p. 173.

⁷⁸ Glareanus modifies *Oman* into *Amon*. A. E. Nordenskiöld: *Periplus*, p. 185.

⁷⁹ A. E. Nordenskiöld: *Facsimile Atlas*, Plate XXIII.

⁸⁰ K. Kretschmer: *Die Entdeckung Amerikas Atlas*, Tafel XVI.

RESPONSIBILITY FOR THE CONCEPT OF THE STRAIT

As to who was the geographer responsible for the conception of the Strait of Anian separating Asia from America, the choice seems to lie between Giacomo Gastaldi and Bolognino Zaltieri. Olinto Marinelli⁸¹ would attribute the conception to Gastaldi on the basis of an opusculum on geography written by him and quoted by Stefano Grande⁸². This work is now lost but Grande quotes the significant paragraph. It is as follows—“L'Asia ha i suoi confini verso Levante, benché nel detto Mapamondo pare che sia verso Ponente; il stretto detto Anian, et si distende con una linea per il golfo Cheinan e passa nel mar Oceano de Mangi fino al Meridiano che è al fin dell' isola di Giapan verso Levante, et seguitando il detto Meridiano verso Austro, includendo l'isola di Gillolo per fino a gradi 15 meridionali di larghezza. Questo sera il confine dell' Asia verso Levante dal Mondo Nuovo. Et seguitando il parallelo ch'è in quelli 15 gradi sempre verso Ponente fino al meridiano, che divide l'Asia dall' Africa verso Ponente quello Parallelo divide l'Asia dal Mondo Nuovo incognita verso l'Austro; il confine che la parte ha verso Ponente, e il confin dell' Europa e dell' Africa, verso Ponente: E il suo confine verso Settentrione, e una linea, la quale principia alla linea della fonte del fiume Don, nel mare Scitico, fin'al stretto Anian, et questi confini danno la separazione a tutte le quattro parti come chiaramente si ha detto, et similmente il mondo nuovo resta in mezzo de sopradetti confini delle altre parti.” This quotation is taken from a booklet entitled *La universale descrizione del mondo*, published⁸³ in Venice, 1562.

There is not known at present any earlier mention of the Strait of Anian either by Gastaldi or by any other

⁸¹ Olinto Marinelli: Lo stretto di Anian e Giacomo Gastaldi, *Revista Geografica Italiana*, Annata XXIV Gennaio. Febbraio, 1917, pp. 42-43.

⁸² Stefano Grande: Notizie sulle Vita e sulle Opere di Giacomo Gastaldi, Torino, 1902, pp. 80-81. G. Caraci: *Tabulae Geographicae Vetustiores in Italia Adservatae*, Vol. II, p. 36.

⁸³ Stefano Grande: Notizie sulla vita e sulle opere di Giacomo Gastaldi, pp. 53-56.

geographer. Moreover this booklet is not in accord with the maps of Gastaldi now known, especially his *Universale*⁸⁴ 1546, the map of the world⁸⁵ 1562, and the three maps *Prima*, *Secunda* and *Tertia Pars Asiae*, 1561. Gastaldi's maps of 1546 and 1562 joined Asia and America after the Schöner conception. The maps of the parts of Asia limit Asia in a way not common at the time and in many ways reminding one of the division of the Ancients, dividing Asia so that Scythia lay to the north of the mountains while India and the kingdoms derived from Alexander's empire lie to the south. Gastaldi omitted from Asia all of that region corresponding to the present Siberia. In no place does the *Tertia Pars Asiae* show a Strait of Anian. On the contrary Asia is bounded on the northeast by the southern part of the *Golfo de Cheinan*. According to the later maps showing the Strait of Anian, this gulf was fairly extensive and opened in its northern extremity into the Strait.

However there need not be any great difficulty made over these facts. The conception of the Strait belongs to a period of transition in geographical conceptions at the same time that it was a common practice to reprint earlier maps in a slightly revamped form for a considerable period of time after that for which the maps were intended.

After Gastaldi had accepted the Schöner conception in his *Universale* 1546 he began to change his ideas. We can note the first step in his map *Universale della parte del mondo nuovamente ritrovata*⁸⁶ prepared for the edition of Ramusio supposedly about 1550. Then in the subsequent years he reached the opinion represented by the quotation given above. At the same time that he wrote *La universale descrizione del mondo* he is supposed to have made a map, now lost, on which these ideas were represented cartographically. Subsequently the Venetian

⁸⁴ Remarkable Maps of the XV, XVI and XVII Centuries, Part IV.

⁸⁵ A. E. Nordenskiöld: *Periplus* p. 165 and Plates LIV-LVI.

⁸⁶ A. E. Nordenskiöld: *Periplus*, p. 163 and p. 159.

printers issued revamped copies of his map of 1546,—in 1562 using his name, and in 1565 Ferando Bertelli printed the *Universale descrizione di tutta le terra conosciuta fin qui*, with the notable addition of the Antarctic Continent. This last seems to be noticed in the above quotation from “*La universale descrizione del Mondo*.” (lines 12–13).

At present the earliest known map with the Strait of Anian represented is that of Bolognino Zaltieri. Zaltieri⁸⁷ seems to have been nothing more than a printer of maps. Marinelli⁸⁸ offers an hypothesis in three parts—1° That Gastaldi was the “inventor” of the concept of the Strait of Anian; 2° That Gastaldi made a world map on which the strait was shown according to the booklet of 1562 but of which map no copy is now known to exist; 3° That the Zaltieri map is a copy of a portion of this lost Gastaldi map. The present writer considers that these hypotheses square with the present known facts and may for the present be accepted as the nearest we may arrive at the truth in the light of our present data.

In conclusion it remains to point out that the separation of America from Asia by the Strait of Anian is entirely different from and unrelated to the separation indicated by Waldseemüller in 1507. Waldseemüller had followed the Behaim—Marco Polo—Ptolemy geography including the known world within the compass of 270 degrees from the Canary meridian. This included the Island of *Zipango* in the known old world. Waldseemüller had indicated the possible separation of America from this Asia by the *Oceanus Orientalis* and had represented a second eastern Asia as a narrow strip of land with no determined western coast line. The Behaim extension of Asia’s mainland to the east through 60 degrees of longitude had served as the first basis of the Columbus concept. Columbus had modified this extension by the use of a shorter degree value. On the basis of this misconception Columbus had made his discovery and consequently he

⁸⁷ Olinto Marinelli: *Lo stretto di Anian e Giacomo Gastaldi* as cited p. 44.

⁸⁸ *Ibid.*, p. 48.

had regarded America as a part of Asia. The further discoveries and explorations of Columbus, Balboa, Magellan and Cortés had resulted in Johann Schöner transferring to America all of the regions represented by Behaim as lying east of Ptolemy's 180th meridian. The further discoveries and explorations of De Soto, Coronado, Alarcon, Cabrillo, and the Portuguese had either eliminated from the map or transferred back to Asia all of the Marco Polo regions. The further shift in degree values and longitudes, first from the Columbus values to the Ptolemy confirmed by the Magellan voyage and second from the Ptolemy towards the Portuguese longitudes still further restricted the area of the Behaim addition to the Ptolemy geography. As a result of these changes when the Strait of Anian concept appeared it made the separation near the 210th meridian at the northern bend of a greatly enlarged Ptolemy's *Sinus Magnus* and to the west of the Behaim additions. Practically all of this Behaim Eastern Asia was, under various new names, included in North and South America while some few Behaim countries figured from time to time in the great Antarctic continent.







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